Agenda Item No._____

File Code No. 540.13

CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: October 11, 2011

TO: Mayor and Councilmembers

FROM: Engineering Division, Public Works Department

SUBJECT: Contract For Preliminary Design Services For The El Estero Wastewater Treatment Plant Aeration System Improvements

RECOMMENDATION:

That Council authorize the Public Works Director to execute a Professional Services contract with Brown and Caldwell in the amount of $362,624 for Preliminary Design Services for the El Estero Wastewater Treatment Plant Aeration System Improvements Project, and authorize the Public Works Director to approve expenditures of up to $36,262 for extra services of Brown and Caldwell that may result from necessary changes in the scope of work.

DISCUSSION:

BACKGROUND

The City's El Estero Wastewater Treatment Plant (El Estero) was originally constructed in 1952, with a majority of the current infrastructure constructed in 1978 to meet 1972 Clean Water Act requirements. To treat wastewater, El Estero uses a combination of physical, chemical, and biological processes. One important area of biological treatment is the activated sludge process which takes place in six large tanks called aeration basins. The aeration basins are the workhorse of the secondary treatment portion of the treatment plant.

On June 29, 2010, Council awarded a contract to Brown and Caldwell (B&C) to prepare an Assessment Report to evaluate and develop recommendations to improve the secondary treatment process. B&C concluded this work effort in September 2011.

B&C, working with staff, evaluated several operational alternative approaches to improving the secondary treatment process at El Estero. This review resulted in B&C and staff's current recommendation to pursue the Aeration System Improvement Project. The El Estero Wastewater Treatment Plant Aeration System Improvements Project (Project) will change El Estero's existing secondary treatment operating strategy from a non-nitrifying system to a nitrification/denitrification system involving a step-feed

biological nutrient removal strategy. This operational change should improve and stabilize the secondary effluent quality and reduce the use of potable water. In addition, the existing aeration system will be upgraded to address existing energy inefficiencies, and to increase operational flexibility by allowing airflow within the secondary aeration basins to be better distributed and balanced.

PROJECT DESCRIPTION

Given the size and complexity of the proposed project, a Preliminary Design Report (PDR) is needed to thoroughly evaluate and define the recommended improvements. The PDR will also develop process design criteria to assure there is clear project direction for final design. The previously completed B&C Assessment Report, along with the PDR, will be used as the basis for final design work. A competitive Request for Proposal process will be used to select an engineering design firm for final design services once the PDR has been completed.

DESIGN PHASE CONSULTANT ENGINEERING SERVICES

Staff recommends that Council authorize the Public Works Director to execute a contract with B&C in the amount of $398,886 to prepare a PDR for the Project. B&C was selected through a competitive process for the Assessment Report work effort and is on the City's Pre-qualified Engineering Services List.

FUNDING

The following table summarizes the estimated total project costs:

ESTIMATED TOTAL PROJECT COST

Assessment Report (by Contract)	$284,621
Project Administration (by Staff)	$38,000
Subtotal	**$322,621**
Preliminary Design (by Contract)	$398,886
Project Administration (by Staff)	$49,815
Subtotal	**$448,701**
Estimated Cost for Final Design and Construction	$13,500,000
Subtotal	**$13,500,000**
TOTAL PROJECT COST	**$14,271,322**

There are sufficient funds in the Wastewater Capital Fund to cover this Professional Services contract work.

SUSTAINABILITY IMPACT:

Nitrification/Denitrification will improve water quality for both recycled water production and treated effluent discharge into the ocean.

PREPARED BY: Joshua Haggmark, Principal Civil Engineer/LA/sk

SUBMITTED BY: Christine F. Andersen, Public Works Director

APPROVED BY: City Administrator's Office